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ABSTRACT

The second year of the city-wide K-12 Bristol (Connecticut) Career Education Project is evaluated in the final report. The third party evaluator utilized an evaluation strategy identified as Information Based Evaluation (IBE). Rather than focusing on program objectives as the sole criteria for evaluation, the design also uses a series of research questions based on the needs of the information users. The results are organized around five domains: student self-concept, student relationship with the world of work, teacher attitudes toward career education and the project, teacher use of project resources, and process and management functions. It was found that according to the self-concept and decision-making measures, the Bristol students approximated the national norms, with some sex differences. In career maturity they were found to be considerably advanced in comparison with national averages. Teachers indicated an understanding of career education as well as a preference for not separating career education from the regular curriculum. Field trips, speakers, and other career education experiences were encountered in differential quantities by school type. The report presents the results, describes the evaluation design and procedures, with conclusions and recommendations. Tables display the data. (NJ)

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FINAL REPORT

FOR THE

BRISTOL CAREER EDUCATION PROJECT

IBEX

CE008972

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CONTENTS

SECTION I.	EXECUTIVE SUMMARY.	1
SECTION II.	CONCLUSIONS AND RECOMMENDATIONS.	5
SECTION III.	PROGRAM DESCRIPTION.	7
SECTION IV.	CONCEPTUAL BASIS FOR EVALUATION. . . .	12
SECTION V.	INFORMATION REQUIREMENTS	16
	Information Users	16
	Information Domains	16
	Evaluation Constraints.	17
	Evaluation Questions.	18
	Data Base Structure and Contents. . .	19
	Instrumentation	20
	Population Selection Procedures . . .	21
	Data Collection Procedures.	22
	Data Analysis Techniques.	23
	Reporting Requirements and Procedures	23
SECTION VI.	EVALUATION RESULTS	24
	Self Observation Scales (SOS)	27
	Decision Making Scale (DMS)	45
	Career Maturity Inventory	51
	Teacher Use of Career Education Resources and Related Practices . .	56
	Process Information	63
	Budget	66

SECTION I. EXECUTIVE SUMMARY

The evaluation of the second year of the Bristol Career Education Project was designed by IBEX, Incorporated, the independent third party evaluator, with the close cooperation of the Project staff and District representatives. Many of the evaluation functions were carried out directly by IBEX, while others were performed by the Project staff and the results reviewed by the IBEX evaluation team.

This section of the report begins with a summary of results and includes a description of the evaluation design, the procedures followed, the results obtained and the conclusions and recommendations reached by the evaluation team.

The IBEX evaluation team was headed by Mr. King Nelson, President of IBEX, and included Mr. Helmuts Feifs, Mr. Gerald Matson and Mr. Gilbert Anderson of the IBEX staff. In addition, much of the on-site work with teachers and the distribution of materials was handled by Marilyn Lanosa, an IBEX consultant located in Bristol.

The evaluation design for the second year of the Project is summarized in Section V. of this report.

Responsibility for the various evaluation functions was divided between IBEX and the Project staff, since much of the data collection and record-keeping was integral to the implementation of Project activities.

Assessment of those Project Objectives and evaluation questions which were dealt with in detail by the Project staff are presented in the Project Director's report. All data collected and analyses performed by the Project staff were reviewed carefully by the evaluation team and found to be accurate.

The results of the evaluation are organized around five information domains or evaluation areas of interest. These domains are: (1) student self concept, (2) student relationships with the world of work, (3) teacher attitudes toward career education and the Project, (4) teacher use of career education resources and related practices, and (5) process and management functions.

The major results of the second year evaluation are summarized in the following paragraphs. A detailed presentation of the results of IBEX's evaluation is found in Section VI. The data obtained from the various instruments administered to the students is not random. Students were to be selected based on the primary sampling unit, the teacher. This was not possible due to programmatic factors. Student instruments were administered by teachers who wished to cooperate. It is the Evaluator's opinion that this lack of randomness did not bias the student data in such a way as to make it unusable.

The importance of a healthy self concept is well recognized. As a measure of children's self concepts, the Self Observation Scales (SOS) were used in this evaluation. The results indicate

that the Project population in grades 3, 6, 7, 8, 9 and 11 approximates the SOS national norming group.

There were some sex differences, however, at all grade levels tested which should be considered by Project staff when developing programs for implementing career education concepts.

The central role that the quality of a student's decision making process plays in his future success in a career is well acknowledged. IBEX developed and normed the DMS (Decision Making Scale) to gauge the decision making process of junior and senior high students. The results closely approximate the national norm. There were, however, some sex differences.

The results of the Career Maturity Inventory indicate that Bristol students are much more mature about their career choices and future options than are students nationally.

In order to assess the participating teachers' attitudes toward the Project and toward the activities of its staff members, IBEX used a modified version of its Educator's Professional Attitude Scale for Career Education. The Teachers' Practices Survey was designed to obtain feedback directly from Project teachers regarding their use of 25 specific techniques and activities related to career education.

The results of the instrument indicate that:

1. Teachers understand Career Education;
2. Teachers would not like to see Career Education taught as a separate concept;

3. The Career Education specialists and other staff are highly visible and active in their schools;

4. Career infusion has occurred in some schools, but not in others.

The process information provided by the Director of the program generally supports the information provided by the teachers' process instrument. Field trips, speakers, and other Career Education experiences are encountered in differential quantities by school type. The amount of funds expended by individual Career Education specialists seems to support the preceding finding.

SECTION II. CONCLUSIONS AND RECOMMENDATIONS

The second year evaluation suffered some setbacks from lack of communication between Project staff and Evaluator. This did result in some misunderstanding and turbulence. The data gathered for the evaluation, however, was not affected.

Based on the results of the second year's evaluation and review of the first year's evaluation, the evaluation team offers the following recommendations:

1. Of the six recommendations from last year's evaluation, the Project Director has acted on five in a most positive manner. A need still exists, however, to provide a means for greater communication from teachers regarding the Project.

2. Improvement in the self concepts of students has occurred from the first year of the program. Some thought should be given to the areas where sex differences do occur.

3. The evaluation of the data on career maturity should provide fertile ground for program development, even though the scores are very high and indicate program success.

4. Specific activities should be undertaken which would raise the level of students' decision making processes.

5. Greater effort should be made to implement the student placement component of the program. A feedback mechanism should be refined to gauge student aspirations and subsequent job fit.

6. A polling should be conducted in the 1975-76 school year which would solicit student expectations regarding career education and future plans.

7. More fiscal control by the Director should be exercised.

8. Some statement, both public and within the Bristol Public School community, should be expressed by the administration. The Project is notable for the lack of this visible administrative support.

9. The Career Education staff should get more involved in the process of evaluation. Evaluation should be a positive good, not an invasive evil.

SECTION III. PROGRAM DESCRIPTION

The following program description was provided by the Project Director, and is included as written.

Penetrating School Strata Through Career Education is a model developed for Career Education at Grades K-12 in Bristol, Connecticut. Bristol is primarily a middle-class industrial community relying heavily upon component parts manufacturing. While the average pay scale for local business and industry is quite high, there is a noticeable reliance on defense sub-contracting; which may cause future economic problems. The 1970 census shows the racial minority to total less than two percent of the population. However, there exist large groups of freshly immigrated French-Canadians, Polish, Italians, Germans and Irish. Total school population for the Bristol School System is 12,163; with an estimated 20% being classified as disadvantaged. The city has operational 22 schools (including 7 parochial schools). The Part D of P.L. 90-756 Exemplary Vocational Education program was conducted in 17 elementary, 1 junior high, and 3 high schools during the year.

I. Administrative Structure

The Project Director reports directly to the Assistant Superintendent-Curriculum and the Bristol Director of State-Federal Programs. Staff reporting to the Project Director were:

Career Resource Center Director
K-6 Career Awareness Specialist (1)
7-8 Career Orientation Specialist (1)
9-12 Career Guidance Specialist (3)

The Director maintained a cooperative relationship with other administrative staff of the Bristol School System plus a Community Advisory Council.

II. Program Design

The Career Education Proposal is designed to restructure the educational program around the students' real life developmental role. Academic knowledge and skills were integrated with occupational training, to assure that each exiting student was prepared for a further educational program or for entry into an occupation.

III. Program Components

The Bristol Career Education program centered on five operational functions:

1. Awareness function (K-6):

   Goal: Through working with cooperating teachers and administrators students were provided opportunities leading to increased awareness of self and the world of work.

2. Orientation function (7-8):

   Goal: Through the development of affective and cognitive components, students were exposed to introductory experiences (via cluster exploration) to potential careers.

3. Experimental function (9-12):

   Goal: Through coupling affective and cognitive components of the Career Education Program with increased occupational skill development programs, students had the possibility of selecting individually significant opportunities in working, training or advanced schooling.

4 Resource function (K-12):

   Goal: Through the gathering, organizing, dissemination and evaluation of commercial public and community resources, Bristol educators have been provided necessary background materials to implement the first three functions.

5. Community Development Function (K-14):

   Goal: Through organizing community involvement and participation in the educational process a significant factor in making educational programs more relevent to the individual and the community has been accomplished.

Project Goals and Objectives:

The Bristol, Connecticut Career Education Program funded by the United States Office of Education grant under Part D of Public Law 90-576, has continued during the past twelve months curricular revision activities relating career education concepts to classroom materials and supportive activites from kindergarten through grade twelve levels. The major goal of the project has been to "infuse" career education concepts into the existing academic subject areas, with a wide variety of support activities for the classroom teacher to help supplement the concepts learned in the academic classroom.

The objectives of the Bristol Career Education Program are as follows:

GRADES K-8 OBJECTIVES

1. To enable students to develop a more positive self-concept and greater understanding of self.

2. To enable each child to display an understanding of the relationship between his own abilities and limitations in terms of the world of work.

3. To develop and expand the pupil's knowledge about a variety of clusters of occupations.

4. To give teachers knowledge of career education concepts, career awareness, career exploration, career preparation, clusters, and self-awareness techniques.

5. To implement curriculum patterns that will illustrate the relationship of school subjects to the world of work.

6. To provide for continuous curriculum development, revision, and evaluation.

7. To enable students to have access and greater understanding of the many community resources available for them.

GRADES 9-12 OBJECTIVES

1. To provide each student with opportunities regardless of his ultimate career goals, to have marketable skills that will enable him to enter the labor force when the need or desire arise for him to do so.

2. To enable each student who desired to undertake advanced preparation, whether it be in a post-secondary technical school, college, university or business school to be so equipped with the necessary prerequisites to understand this advanced training.

3. To provide opportunities for students to participate in meaningful occupational explorations.

4. To provide greater encouragement for student enrollment in vocational education programs.

5. To provide greater encouragement for student enrollment in work experience programs, and a wide range of work experiences.

6. To provide intensive guidance and counseling in preparation for employment and/or future education.

7. To develop career information programs to be carried out by departments within the scope of the curriculum.

8. To establish a continuing avenue of communications between school, business, industry, and community.

9. To follow-up all dropouts and graduates and to use such data in the planning of future programs.

OBJECTIVES OF THE PLACEMENT COMPONENT

1. To locate and isolate significant career job opportunities in the community which can be offered to exiting Bristol students.

2. To offer such job opportunities to said students through a system which allows for clear and precise communications between employers, students and concerned education officials.

3. To utilize information retrieval forms which permit a matching of student interest and abilities with job specifications.

4. To develop processes which allow for the rapid identification of exiting students who would be interested in using this placement service.

5. To provide for the following systems within this placement service:

   a). Reporting

   b). Referral

   c). Follow-up analysis

   d). Program revision

RESOURCE CENTER OBJECTIVES

1. To serve as a dependable source of supply for the career education specialists and others availing themselves of the services of the program.

   a. To satisfy their needs, whether they be for some tangible item already in the Center, for something which must be developed especially to meet their particular need, or for one of the so-called "people resources" which are often the most difficult to produce.

2. To serve as a source of suggestions for both new materials and new methods which the career education specialists cannot keep abreast of on their own.

   a. These suggestions cover both commercially and locally developed career education aids as well as materials and ideas borrowed from other career education programs.

3. To serve as an on-going educational influence on those involved in the program by providing classroom teachers an understanding of what career education can offer them and their students through inservice teacher training sessions.

   a. These range from workshops designed specifically to acquaint teachers with the services of the Resource Center to those which involve participants in various activities which can be taken to the classroom and used to infuse career education into the curriculum.

Procedures Followed:

The procedures followed for the second year of the program continued to be those established during the course of the first year. After researching and defining procedures to be followed for curriculum revision within the Bristol Public School System, these established procedures are being implemented. Continued teacher involvement in any career education undertaking seems to be the key. Teachers are asked to try to incorporate at least one of the concepts of career education into their existing lesson plans whenever possible. Each of these activities are developed with the help of the specialist at the teacher's appropriate level. Completed activities were gathered for the year, and will be published and issued in the Fall of '75 as a supplement to the three published Career Education Curriculum Guides.

SECTION IV. CONCEPTUAL BASIS FOR EVALUATION

The strategy upon which this evaluation report builds is called Information Based Evaluation (IBE)*. This strategy has been successfully implemented on some fifty projects at both the state and local level over the past three years.

The concept of information utility is the overriding characteristic that differentiates "good" evluation from "poor" evaluation, and differentiates undisciplined data collection from information gathering. Judged by even modest standards of utility, educational research and evaluation has a pitifully poor record and the unfortunate educational manager or policy maker operating within this void must sift through mountains of data for those kernels of desired information.

In the social sciences in general, and in education in particular, the mechanisms do not exist for supplying information to those who need it. The traditional evaluation meahanism has not added much to the meager research contribution. Theoretically, evaluation should be a suitable mechanism, but it has suffered from growing pains and an obsession to separate itself clearly from the research model. The Information Based Evaluation model, hopefully, suffers from no such obsessions, except perhaps that of adhering strictly to the concept of information utility.

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* A. Jackson Stenner, Information Based Evaluation Series Book 1: An Overview of Information Based Evaluation: A Design Procedure. Arlington, Virginia. IBEX, Inc. 1972.

Another contributing factor to the inadequacy of present day evaluations has been the relationship between evaluation and the performance objectives movement. The symbiotic growth these two concepts have enjoyed has served to reduce the full potential of educational evaluation. The crucial role performance objectives play in program management is obvious; however, the question arises as to what place objectives should have in evaluation. The Information Based Evaluation approach views program objectives as a focus of evaluation activity, but by no means as the focus. More traditional approaches to evaluation have used performance objectives as the foundation for the planning and execution of evaluation activities. This procedure is considered inadequate for several reasons:

1. Basing evaluation on performance objectives restricts the focus of evaluation to intended outcomes, thus overlooking unintended outcomes which are potentially just as important.
2. Performance objectives provide a very inflexible basis for evaluation in that they are seldom changed during the program year, and thus information needs (which are fluid) cannot be adequately addressed.
3. Even if information on the attainment of all performance objectives is provided, important information is invariably ignored because objectives are not developed with information needs in mind, but rather, are developed as guideposts for program management.

4. Objectives based evaluation often views each objective as a unique area of focus and thus, important relationships are often overlooked.

If program objectives are inadequate as a foundation for evaluation, what are the alternatives? How do we define the parameters of evaluation, i.e., what are the reference points? In objectives based evaluation, the reference points are the program objectives. In information based evaluation the reference points become the information users for the program and the information domains (needs). Capitalizing on these two reference points, a technique called domain analysis can be used to define and focus the direction of the evaluation.

Information based evaluation should not be considered as "objective free" evaluation. Information based evaluation recognizes the importance of program objectives, but only to the extent to which feedback on the objectives is considered important to information users. The overriding consideration is the type of questions about which relevant individuals desire answers. Priorities are established in both the information domain categroy (e.g., student cognitive growth) and the information user category (e.g., local superintendent) and the evaluation resources are expended to meet these identified priorities. An additional check on the adequacy of evaluation information is the extent to which the information leads to action. If no relationship exists between information and action, then the adequacy and/or quality of the evaluation effort is in doubt.

In polling the various information users, the evaluation team can often develop evaluation questions that relate to "unintended outcomes" or "shadow benefits". These questions occur because all information users are probably not supportive of the program procedures and/or objectives; thus their information needs will highlight aspects of the program that would not receive attention in an objectives based evaluation effort. Program developers and program staff generally have a highly developed commitment for the program and are myopic in viewing the outcomes of the program. The possibility that the program may cause some negative side effects is very difficult for them to comprehend, let alone accept. However, individuals or factions that have been against the program from the start are generally more than capable and willing to identify potential weaknesses and unintended outcomes. Therefore, in serving each information user, the evaluation team can gain a balanced view of the program.

Information based evaluation recognizes that an evaluation must be dynamic if it is to be responsive. Program objectives rarely change during the project year, thus the objectives based evaluation is static and methodical in responding to the information requirements. Information based evaluation accepts the fact that information needs are fluid, and new questions are posed throughout the program cycle.

SECTION V. INFORMATION REQUIREMENTS

The following requirements are the results of design conferences and discussions held over the 1974-75 school year.

Information Users

The needs of the various information users were discussed at the design conferences. These users were:

U.S.O.E.
State Department of Education
Participating district personnel
Teachers
Parents
Community groups
Advisory Council members.

It was agreed, in concert with the Program Director, that rather than consider the needs of these users separately, the evaluation team would base its evaluation on one set of requirements encompassing the individual needs of all users.

Information Domains

The primary source of information domains is the Project Overview prepared by the Project Director. These requirements were discussed in detail at the design conferences, where additional areas were identified. The major information domains for the evaluation of the 1974-75 year of the project are listed below.

- Student Outcomes

  Self awareness

  Career decision making skills

  Awareness of and knowledge about work

- Process

  Career Education activities at classroom and school levels

  Curriculum units and guides

  Internships

  Placement and follow-up

  Resource centers

  Inservice programs

  Community Resource and Career Education Material Bibliographies

Evaluation Constraints

Resources available for evaluation: Specified in Contract.

Student Time: Sufficient for administration of a limited number of instruments to selected samples.

Teacher time: Sufficient for administration of student instruments and completion of limited "process" data collection forms.

Project schedule: Enough time remaining in the 1974-75 project year to answer the specified evaluation questions and collect data relative to the overall project goals.

Availability of instruments: Student outcomes were measured using commercially available instruments, with the exception of two instruments still in the developmental stage. Results from the previous year's evaluation will be available to the evaluation team. The process dimensions of the evaluation required the development of certain data collection instruments by the evaluation team.

Evaluation Questions

Based on the needs of information users, the information domains of interest and the evaluation constraints, a set of evaluation questions were developed. Modifications were made as the evaluation process was carried out.

- How does the self concept of students participating in various components of the project compare with students nationally and with other students locally?
- How does the awareness of and knowledge about work of students participating in various components of the project compare with students nationally and with other students locally?
- How do the career decision making skills of students participating in various components of the project compare with students nationally and with other students locally?
- To what extent were students who participated in the project and who left the project schools placed in paid occupations, in further education, or in unpaid work that was consistent with their current career choice?
- To what extent has the number and type of job preparation opportunities been expanded for young people in grades 10 through 14?

- What financial resources from Section 142(c) of Part D of P.L. 90-576 were expended for the current project year, by budget category?
- To what extent were project activities carried out according to schedule?
- What factors caused changes in scheduled activities?
- What are the major "process" dimensions of the project, as implemented this year?
- What are the relationships among the student outcomes and the various process dimensions being implemented this year?
- To what extent were curriculum units and guides developed and implemented this year?
- How effective was the Career Resource Center in meeting its objectives for this year?
- To what extent were the Community Resource and Career Education Material Bibliographies developed and used this year?

Data Base Structure and Contents

The project evaluation data base consists of those elements needed to answer the specified evaluation questions

and to provide baseline information relative to the three-year project goals. There are two major components: a student file and a process file.

The student file includes demographic data and the results of the various student assessment instruments, including data from the previous year.

The process file includes the data collected to answer the process and descriptive evaluation questions.

All data in the data base will be provided to the Project Director after completion of the year-end evaluation report.

Instrumentation

The major instruments used in the evaluation of the 1974-75 year of the project were:

Self Observation Scales (SOS) - A measure of student self concept. At the primary level (K-3), the scales consist of Self Acceptance, School Affiliation, Social Maturity, Self Security and Achievement Motivation. At the intermediate level (4-6), the scales consist of the preceding five plus Social Confidence, Teacher Affiliation and Peer Affiliation. At the secondary level (7-12) scales include Self Security, Social Maturity, Peer Affiliation, Teacher Affiliation, Family Affiliation, School Affiliation, Social Confidence, Self Assertion, and Self Acceptance.

Career Maturity Inventory - A measure of the maturity of attitudes and competencies that are crucial in realistic career decision making. There are two parts: an Attitude Scale and a Competency Test. The instrument is appropriate for grades 7-12. The Attitude Scale was not used and only parts 4 and 5 of the Competency Test were used.

Career Education Questionnaire - Due to the manufacturer not anticipating the demand for this instrument, it was not available for use in this evaluation. IBEX has had several discussions with the manufacturer about the instrument's availability for the 1975-76 school year. It should be available.

Decision Making Scale - A developmental set of instruments which measure the cognitive and affective dimensions of the decision making process.

Teacher Survey - An instrument developed by the evaluation team to collect information from teachers relative to their attitudes toward, and their activities associated with, the career education program.

Population Selection Procedures

Students

Students were selected for Spring administration of the various student assessment instruments as follows. The sampling unit was the teacher. Classes were selected from participating schools on the basis of specific identified project activities, as determined from the Teacher Survey.

Approximately nine classes at each of grades 3, 6, 9 and 11 were included in the sample. An attempt was made to include as many students as possible from the 1973-74 testing program conducted by IBEX.

Teachers

All teachers were to be administered the teacher instrument.

Data Collection Procedures

Students

All student assessment instruments were administered in the Spring. The following table shows the grade levels at which the various instruments were administered.

	Grade Level					
Instrument	3	6	7	8	9	11
Self Observation Scales	X	X	X	X	X	X
Career Maturity Inventory		X			X	X
Decision Making Scale					X	X

Teachers

The Teacher Survey was administered in the Spring prior to the student assessment activities.

Data Analysis Techniques

In answering the evaluation questions, a number of data analysis techniques were used. For a substantial number of the questions, simple descriptive statistics sufficed; however, some of the more complex questions required more complex analysis techniques. For example, questions regarding the relationships among self concept, decision making skills and achievement required multivariate techniques.

IBEX has developed a comprehensive package of computer programs to meet its research and evaluation needs, and the entire student data file has been placed on magnetic tape for analysis and reporting of results.

Reporting Requirements and Procedures

Because of the variety of audiences that has made use of this evaluation information, the way the information is presented becomes vitally important; likewise, the presentation format must be suited to presenting considerable quantities of data in a relatively small space and yet be easily and quickly interpreted. IBEX has had excellent experience with a profile or pattern technique and has used this approach where possible in presenting the results of this evaluation. In addition to the ease of presentation, this technique lends itself to a series of analysis strategies (pattern analysis) that are also easily presented and interpreted.

SECTION VI. EVALUATION RESULTS

This section is organized around five major information domains or evaluation areas of interest. These domains are: (1) student self concept, (2) student decision making skills, (3) student relationships with the world of work, (4) teacher attitudes toward Career Education and the Project, and (5) process and management functions.

Student Self Concept

The first Project Objective at the elementary level is "to enable students to develop a more positive self concept and greater understanding of self".

Between the ages of five and twelve, the self concept begins to crystalize. During this period (termed the "latency period" by many authors), the child matures considerably in the physical, cognitive and affective areas. He confronts his environment with an increasingly stable set of feelings, attitudes and behaviors which are based, to a large extent, on his self concept which is, likewise, stabilizing. As the child becomes older he becomes more sure of what he likes and dislikes, who he likes and dislikes, what he enjoys doing and what he dislikes doing, how he sees his future and what he will be doing in this future. He begins to plan and his aspirations and hopes tend to be consistent with the way he values himself, which, in turn, is dictated in large part by how he perceives others value him.

Although the early school years are characterized by a crystalization of self, the child also begins to differentiate. The self concept of the five-year-old is a relatively simple construct. The five-year-old views most things as a dichotomy: people are good or bad, food is good or bad, places are happy or sad places to be, other children are friendly or mean. As the six-year-old enters first grade, new demands are placed on him. He is expected to interact with unfamiliar children and authority figures and, to a great extend, his well being is determined by how successfully he negotiates these new demands. It is these early school years that have a truly profound impact on the child's self concept development. Never before has he been consistently, objectively and sometimes coldly, judged by peers and adults. He is unable to separate himself from his actions so that reprimands and criticism often become viewed as direct threats to self. With this background information we now turn to the correlates of a positive and negative self concept, respectively.

The Positive Self Concept*

Children with positive self concepts are, first of all, confident about their ability to meet everyday problems and demands. They are confident about their relationships with other people and take pleasure in mutual interdependence, in needing others and in being needed. Autonomy and independence are beginning to take shape. Children with strong self concepts view themselves as desirable and valuable contributors to the well being of those around them. They see themselves as deserving of attention and love and feel they are capable of reciprocating. They compare themselves favorably with their peers and feel that authority figures are supportive and interested in them as individuals. These children tend to be comparatively independent and reliable. These qualities may stem from their feelings of sufficiency and adequacy in new and challenging situations. They are relatively free from anxiety, nervousness, excessive worry, tiredness and loneliness. They report being happy with the way they look and would not change their appearance if they could.

Children with a positive view of themselves enjoy interacting with their peers and see themselves as on a par with their peers in most situations, while occasionally professing superiority in certain areas. They recognize the social consequences of certain "asocial" actions and see the benefits of give-and-take in social interactions. These children are able to admit that they make mistakes and that they sometimes hurt other people, but they apparently do not view these admissions as major threats to self.

Behaviorally, these children are seldom designated as problem children. They usually appear comparatively calm, keep their hands to themselves and, although they are frequently competitive, they express aggression when external considerations warrant aggressive behavior. They express dissatisfaction with their own poor performances but relatively seldom make self deprecating remarks. They react positively to constructive criticism, can accept praise well, and derive obvious pleasure from a job well done.

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* The profiles for a "positive" and "negative" self concept are drawn from the results of the national validation and norming of the Self Observation Scales.

Scholastically, children with positive self concepts tend to be above expectation in reading and mathematics. They tend to attain higher scores on standardized achievement tests than would be predicted from ability tests. These children are positive toward school and view it as a happy, worthwhile place to be.

The Negative Self Concept

Children with poor self concepts are insecure and pessimistic about their ability to meet everyday problems and demands, and they are unsure about their relationships with others. They often tend to be either overly dependent and withdrawn or overly aggressive with apparently minimal overt needs for social interaction and, in each case, growth toward autonomy appears stunted and retarded. These children view themselves as undesirable and, through their often inappropriate behavior (which is, although inappropriate, usually quite consistent with the way the children feel about themselves), they are regularly reinforced in these feelings.* They report not being needed by significant others and do not feel that others care about them as individuals. They compare themselves unfavorably with their peers, and frequently report being inferior to their peers in age-appropriate activities. Authority figures represent a threat to children with poor self concepts.

These children are threatened in social interactions and prefer to play with younger children. They report a desire to dominate in peer-oriented activities, i.e., always wanting to be first or always wanting to be the leader, and yet, would prefer to play alone if given a choice. They tend to be quitters and are satisfied with poor performance (again, poor performance is consistent with the way these children view themselves). These children find it difficult to admit to even common mistakes and are quite insensitive to other people's feelings.

Behaviorally, these children are frequently labeled as problem children. The acting out, aggressive, verbally disruptive child has a markedly lower self concept than does the "healthy" child. Likewise, the insecure, withdrawn, quiet child also has a low self concept, but his inadequacies are manifested differently from the aggressive child. These children respond negatively to criticism and, surprisingly, they often respond inappropriately or even negatively to praise because positive feelings are inconsistent with the way these children feel about themselves.

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* Modifying the truism from the financial world that "the rich get richer and the poor get poorer", we can say that children with strong self concepts get positive reinforcement and, thus, get stronger, while those with weak self concepts get negatively reinforced and thus, get weaker.

Scholastically, children with poor self concepts tend to be below average in reading and mathematics. They tend to obtain lower scores on standardized achievement tests than would be predicted from ability tests. These children are negative toward school and view it as an unhappy place to be.

As a measure of children's self concepts, the Self Observation Scales (SOS) were used in this evaluation. The SOS is a direct self report, group administered instrument comprised of fifty items at the primary level K-3) and sixty items at the intermediate level (4-6).

The Primary level of the SOS measures five dimensions of children's self concept. Each scale is labeled in a positive manner with high scores being most characteristic of the scale name.

The scales are as follows:

Self Acceptance

Children with high scores view themselves positively and attriubte to themselves qualities of happiness, importance, and general competence. They see themselves as being valued by peers, family and teachers. Children with low scores see themselves as unhappy, lacking in general competence and as of little importance to others.

Social Maturity

Children with high scores on this scale know how they are supposed to think and f[illegible] in a variety of social situations. They have learned the importance of such notions as "fair play", "sharing", "perserverance", "helpfulness", and "generosity". Children with low scores on this scale have not learned these notions and are likely to evidence behaviors that most adults would characterize as selfish, inconsiderate or immature.

School Affiliation

Children with high scores view school as a positive influence in their lives. They enjoy going to school, and they enjoy the activities associated with school. Children with low scores view school as an unhappy place to be. They do not enjoy most school-related activities and are negative about the importance of school in their lives.

Self Security

Children with high scores report a high level of emotional confidence or stability. They feel that they are in reasonable control of the factors that affect their lives and spend little time worrying over possible troubles. Children with low scores on this scale worry a great deal. They are concerned that something bad may happen and report feelings of nervousness.

Achievement Motivation

This is a special scale, relating achievement and ability to self concept. High scores indicate increased probability that the child will achieve well relative to ability; low scores indicate increased probability that the child will not achieve as well as might be expected on the basis of his ability. This scale is considered to be experimental, and we recommend that its use for individual assessment be deferred pending the results of our current program of confirmatory analyses.

The Intermediate level of the SOS measures the same five dimensions of children's self concept and adds three additional scales, as follows:

Social Confidence

Children with high scores on this scale feel confident of their ability to relate successfully in social situations. They feel confident that they can make freinds easily and that they are valued and enjoyed by their friends. Children with low scores have difficulty making friends, do not feel valued by others and see other people as being more socially adept than themselves.

Teacher Affiliation

Children with high scores on this scale like their teachers. They see the teacher as helpful, attentive, understanding and generous. Children with low scores on this scale see the teacher as arbitrary, inconsiderate of children, and/or as a source of emotional pain.

Peer Affiliation

Children with high scores on this scale consider their relationships with other children to be both of high quality and of considerable importance to them. They see themselves as approved of and valued by their peers. They like to be with other children. Children with low scores do not see their peer relationships as an asset. They see other children as unfriendly, they have few friends, and do not accept the responsibilities of friendship easily.

The Junior and Senior High levels of the SOS were also used in this evaluation. The scale descriptions of these instruments follow.

The Junior Level of the Self Observation Scales is designed for use at grades 7-9. Form A measures nine dimensions of students' affective behavior, while Form B measures the same dimensions, less the Family Affiliation Scale. Each scale is labeled in a positive manner with high scores being most characteristic of the label.

SCALE I - SELF ASSERTION

Students with high scores view themsleves as possessing leadership qualities and as being respected by others for these qualities. The emphasis on this scale is on how students believe others view them. Students with low scores see themselves as lacking leadership ability and assertiveness. Three items highly related to this scale are: Other students look to me for leadership; Other students look to me for ideas; In discussions with my friends, my point of view usually wins.

SCALE II - SELF ACCEPTANCE

Students with high scores view themselves positively and attribute to themselves qualities of basic competence, self satisfaction and happiness. They see themselves as being good at a lot of activities and as being confident about their future success. Students with low scores are unsatisfied with their performance and capabilities and are unsure of their futures. Three items highly related to this scale are: I do a lot of things well; I think I will be successful in life; When I look in the mirror, I like what I see.

SCALE III - SELF SECURITY

Students with high scores report a high level of emotional confidence or stability. They report being in control of factors affecting thier lives and worry very little about either specific or non-specific fears. Students with low scores on this scale worry a great deal. They report nervousness about non-specific performance expectations and often feel that they worry more now than in the past. Three items highly related to this scale are: I often find myself worrying about something; At times I lose sleep over worry; I worry about losing my friends.

SCALE IV - SOCIAL MATURITY

Students with high scores on this scale know how they are supposed to think and feel in a variety of social situations. They are comfortable around younger children and show empathy in their social relations. They believe in saying what they feel and understand the importance of listening to others. Students with low scores on this scale are socially self centered, lack responsiveness to other people's feelings and are reticent to express their own feelings. Three items highly related to this scale are: When I feel like it, I cry; Younger kids usually bore me; Most of the time I feel sorry for someone who is hurt.

SCALE V - SOCIAL CONFIDENCE

Students with high scores on this scale feel confident of their ability to relate in social situations. They feel confident about their ability to make and keep friends and believe that other people value their friendship. Students with low scores have difficulty making friends and lack confidence in social situations. Three items highly related to this scale are: People who are like me don't have a good chance to be successful; Most of my friends don't care what I think; If people knew what I am really like, they would steer clear of me.

SCALE VI - SCHOOL AFFILIATION

Students with high scores view school positively, enjoy going to school and enjoy the activities associated with school. Students scoring low on this scale see school as a "hassle" that keeps them from doing what they want to do. Three items highly related to this scale are: I like to stay home from school; This school is like a jail; School frequently keeps me from doing what I want to do.

SCALE VII - TEACHER AFFILIATION

Students with high scores on this scale like their teachers. They see the teacher as helpful, attentive, understanding and generous. Students with low scores see the teacher as arbitrary, inconsiderate of children and/or as a source of emotional pain. Three items highly related to this scale are: My teachers like to help me; When I do something wrong, my teachers correct me without hurting my feelings; My teachers expect too much of me.

SCALE VIII - PEER AFFILIATION

Students with high scores on this scale consider their relationships with other students to be both of high quality and of considerable importance to them. They see themselves as approved of and valued by their peers. They like to be with other students. Students with low scores do not see their peer relationships as an asset. They see other students as unfriendly, they have few friends, and do not accept the responsibilities of friendship easily. Three items highly related to this scale are: I make friends easily; Other students are usually fair to me; I can count on my friends when I am in trouble.

SCALE IX - FAMILY AFFILIATION

Students with high scores on this scale report a positive relationship with their parents and family. They see their parents as helping in time of need and as being understanding. Students with low scores don't see home as a place to go when troubles begin. They do not feel trusted by their family and, likewise, do not feel that they treat their family as well as they should. Three items highly related to this scale are: My parents usually understand my problems; My parents do all they can for me; I treat my parents as well as I should.

The Senior Level of the Self Observation Scales is designed for use at grades 10-12, and measures the same nine dimensions of students' affective behavior as does the Junior Level.

Scoring of the SOS is based on national norms. For each scale, a child receives a standard score (T score), representing a distribution with a mean of 50 and a standard deviation of 10. Responses to individual items are not given. All levels of the SOS were given to the student sample in the Spring of 1975. The numbers of students taking the SOS are shown in the following table.

TABLE 1

Self Observation Scales
Sample Population

	Grade Level					
	3	6	7	8	9	11
Total Sample	261	200	155	49	202	197

Results of the SOS will be presented by level, beginning with the Primary Level (K-3).

TABLE 2

Self Observation Scales
Primary Level - Grade 3
N = 261
Mean Standard Scores

	Scales				
	Self Acceptance	Social Maturity	School Affiliation	Self Security	Achievement Motivation
Total	48.5	52.5	46.1	51.6	45.7
S.D.	9.9	7.4	11.9	9.8	16.7

Sex differences at the Primary Level were found for a number of scale-grade combinations, as shown in the following table, and in graphic form in Graph 1.

TABLE 3

Self Observation Scales
Primary Level, N = 261
Grade 3
Mean Standard Scores by Sex, by Grade

	Mean Scores		S.D.	
	Boys	Girls	Boys	Girls
Self Acceptance	47.7	49.4	10.3	9.5
Self Security	52.3	50.3	9.6	9.9
Social Maturity	51.8	54.2	7.0	7.4
School Affiliation	44.2	48.7	12.3	11.2
Achievement Motivation	43.9	46.6	17.7	17.0

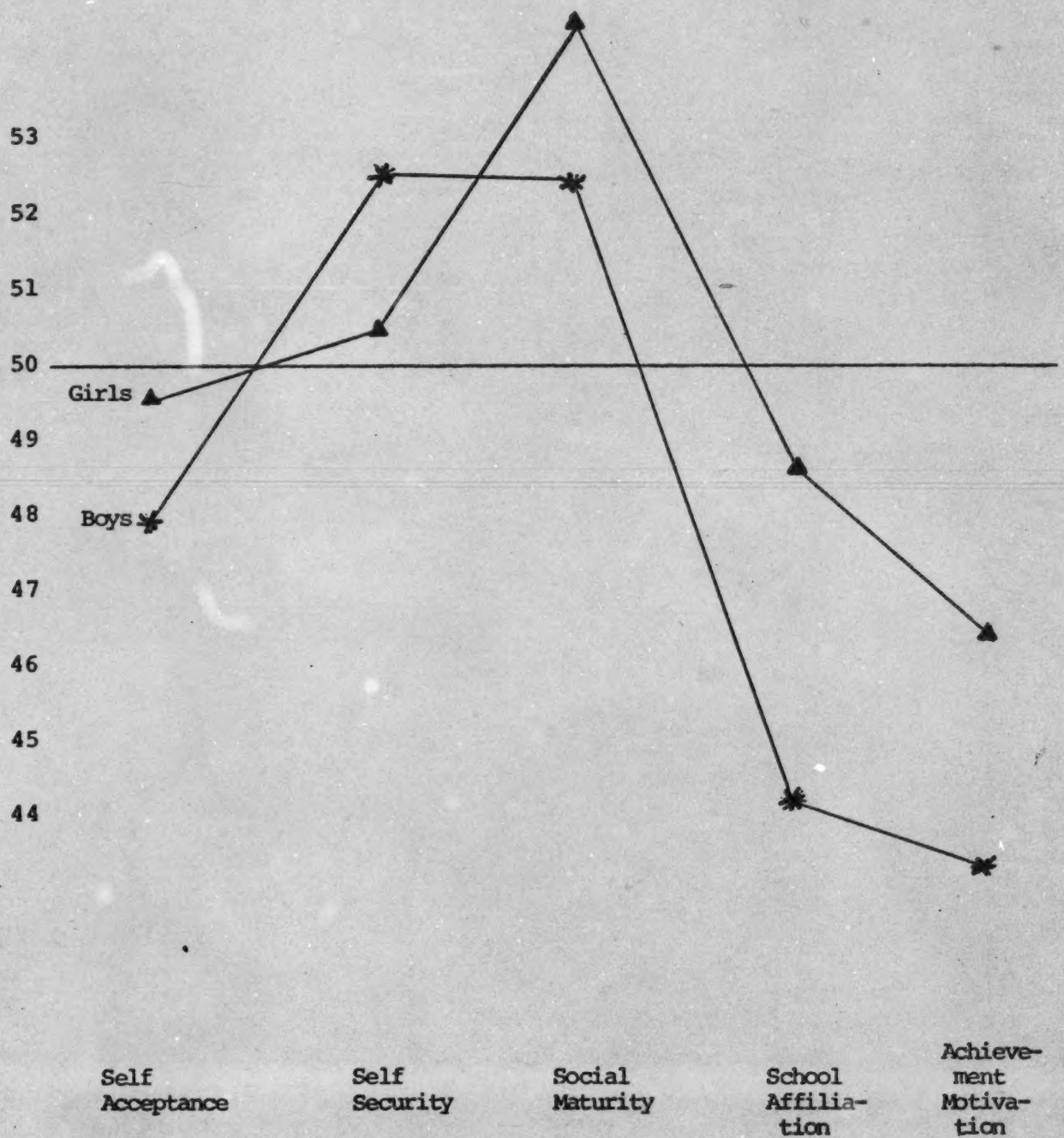
The results of the SOS in Grade 3 indicate that the third graders tested are low on Self Security, School Affiliation and Achievement Motivation. They are, as a group, high in Social Maturity and Self Security. Some sex differences are noted in the results. Girls are generally higher across all scales except for Self Security.

GRAPH 1

Self Observation Scales
Primary Level

Mean Standard Scores by Grade, by Sex

Grade 3



The results of the Intermediate Level of the SOS are as follows.

TABLE 4

Self Observation Scales - Grade 6
Intermediate Level; N = 200
Mean Standard Scores by Sex, by Grade

	Total N=200		Boys N=101		Girls N=99	
	Score	S.D.	Score	S.D.	Score	S.D.
Self Acceptance	51.3	9.7	49.8	9.7	53.9	8.7
Self Security	48.5	10.5	48.7	10.8	48.2	10.3
Social Maturity	52.9	8.5	51.3	8.9	54.6	7.7
Social Confidence	54.1	7.6	52.5	7.0	55.7	7.8
School Affiliation	49.3	10.0	46.7	10.6	51.9	8.7
Teacher Affiliation	51.1	8.4	48.5	9.2	53.8	6.7
Peer Affiliation	51.2	9.7	50.3	9.6	52.1	9.7
Achievement Motivation	50.2	5.3	48.9	5.5	51.5	4.7

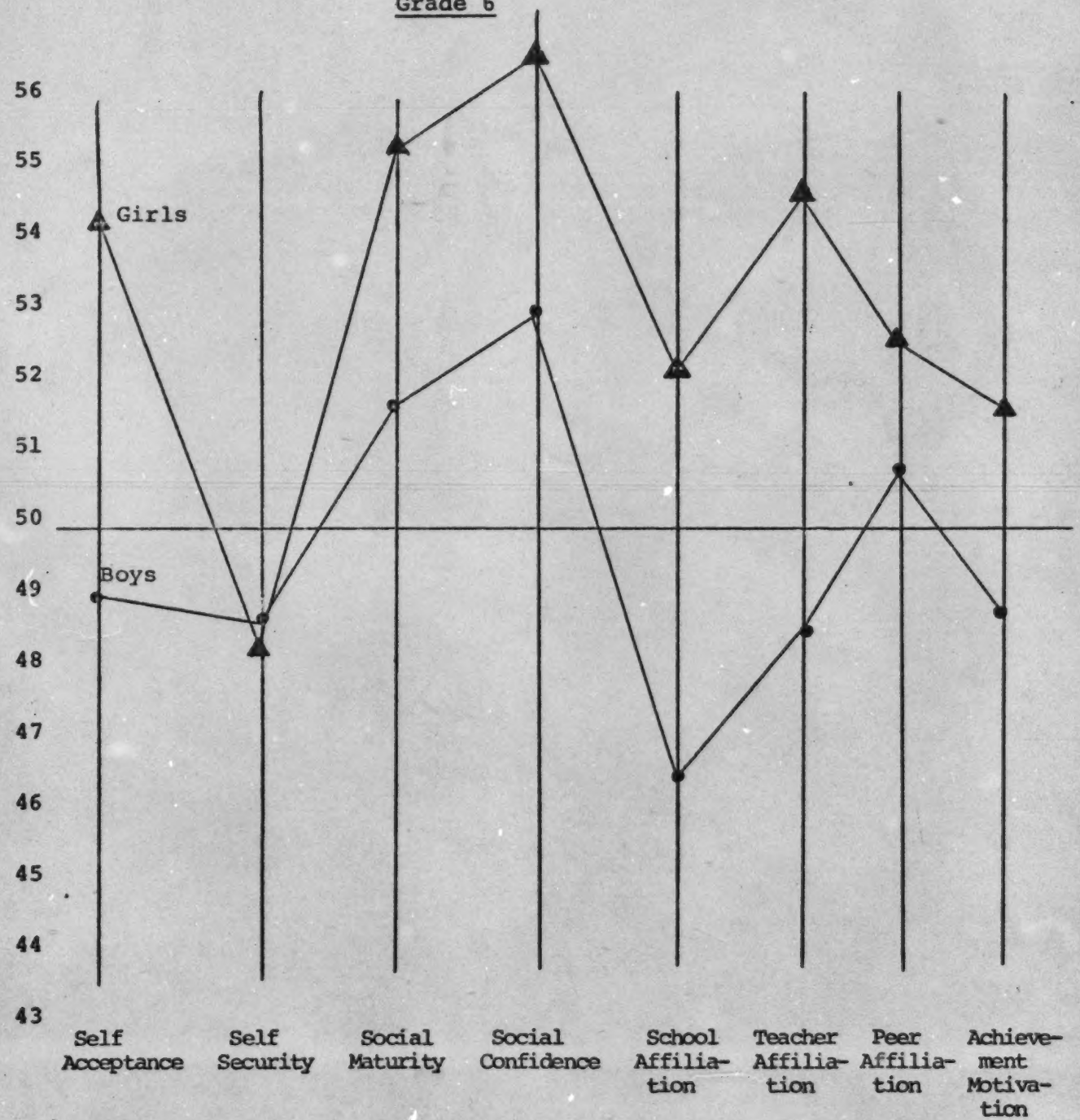
The results of the Intermediate SOS at Grade 6 indicate for all sixth graders tested, that as a group they are low in Self Security and School Affiliation. They are high in all the other scales. Some sex differences are evident. Girls are more self secure than boys.

GRAPH 2

Self Observation Scales
Intermediate Level

Mean Scores by Grade, by Sex

Grade 6



The results of the Junior High Level of the SOS are:

TABLE 5

Self Observation Scales - Grade 7
Junior High Level
N = 155

	Total N=155		Boys N=69		Girls N=86	
	Score	S.D.	Score	S.D.	Score	S.D.
Self Assertion	49.3	10.6	49.4	10.6	49.3	10.4
Self Acceptance	50.8	11.0	51.1	10.9	49.2	11.1
Self Security	49.7	9.8	43.4	10.0	54.5	6.5
Social Maturity	52.3	9.0	48.5	8.8	55.4	8.0
Social Confidence	47.6	8.7	48.6	9.1	46.8	8.3
School Affiliation	51.0	9.7	50.9	10.2	51.0	9.4
Teacher Affiliation	49.8	10.7	48.4	11.7	50.9	9.8
Peer Affiliation	51.2	11.0	49.5	11.9	52.5	10.0
Family Affiliation	50.6	11.1	49.9	11.6	51.9	10.5

TABLE 6

Self Observation Scales - Grade 8
Junior High Level
N = 49

	Total N=49		Boys N=32		Girls N=17	
	Score	S.D.	Score	S.D.	Score	S.D.
Self Assertion	51.4	8.2	51.1	7.6	52.0	9.4
Self Acceptance	51.4	9.7	52.8	9.7	48.7	9.3
Self Security	47.7	9.7	45.1	8.7	52.6	9.7
Social Maturity	54.1	7.6	53.4	8.2	55.6	6.2
Social Confidence	49.4	16.6	49.3	11.0	49.7	10.2
School Affiliation	49.1	9.4	49.1	8.9	49.1	10.4
Teacher Affiliation	50.3	9.9	49.8	11.3	51.5	6.6
Peer Affiliation	49.7	9.7	47.6	9.9	53.5	8.2
Family Affiliation	45.2	10.9	43.5	10.9	48.3	10.5

TABLE 7

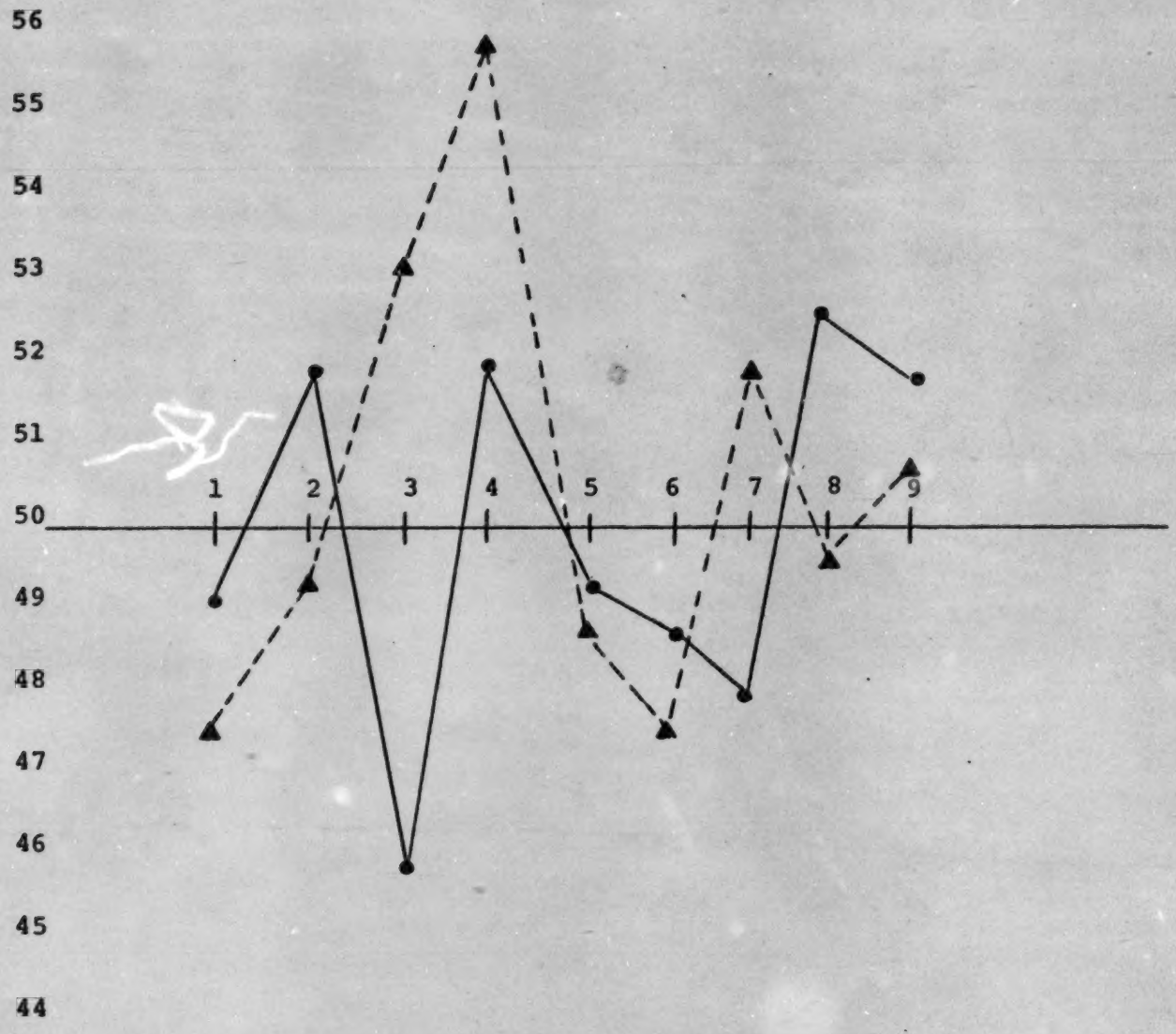
Self Observation Scales - Grade 9
Junior High Level
N = 202

	Total N=202		Boys N=118		Girls N=84	
	Score	S.D.	Score	S.D.	Score	S.D.
Self Assertion	48.1	10.5	48.8	10.4	47.2	10.6
Self Acceptance	50.6	9.9	51.7	10.3	49.1	9.1
Self Security	48.7	9.7	45.8	9.9	52.9	7.7
Social Maturity	53.3	9.1	51.8	9.0	55.5	8.8
Social Confidence	49.0	9.6	49.2	9.3	48.6	9.9
School Affiliation	48.0	10.4	48.6	10.6	47.1	10.2
Teacher Affiliation	49.1	11.5	47.5	12.2	51.4	10.2
Peer Affiliation	51.1	10.4	52.1	9.8	49.6	11.1
Family Affiliation	51.0	10.7	51.3	10.2	50.7	11.4

Junior High
Self Observation Scales

GRAPH 3

Grade 9, by Sex



Legend:

Boys ●——●

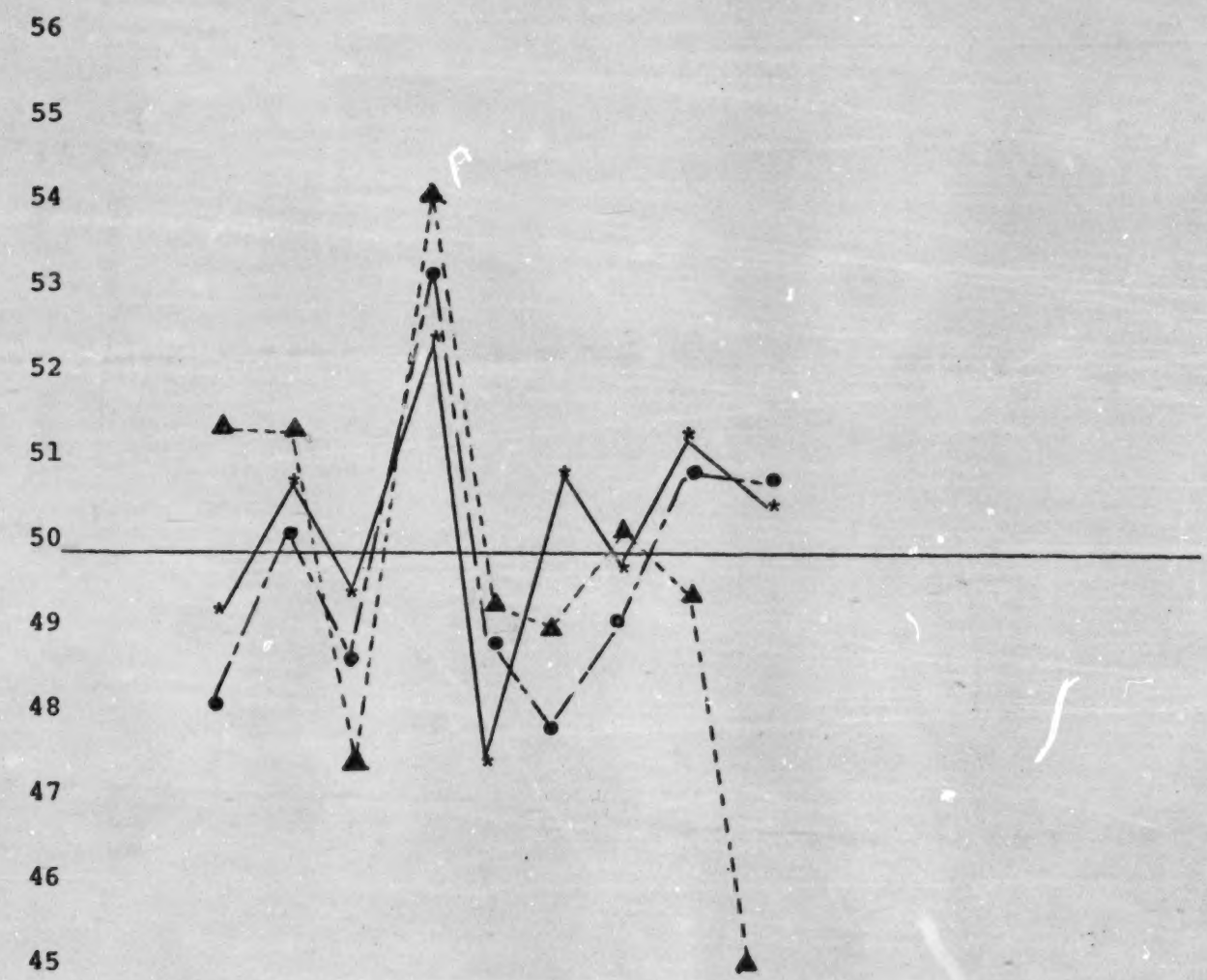
Girls ▲- - - - - -▲

Scales:

1. Self Assertion
2. Self Acceptance
3. Self Security
4. Social Maturity
5. Social Confidence
6. School Affiliation
7. Teacher Affiliation
8. Peer Affiliation
9. Family Affiliation

Self Observation Scales
Junior High Level GRAPH 4

Grades 7, 8 and 9, Total Scores
by Grade



Legend:

Grade 7 ★——★
" 8 ▲- - - - - ▲
" 9 ●— - —— ●

Scales:

1. Self Assertion
2. Self Acceptance
3. Self Security
4. Social Maturity
5. Social Confidence
6. School Affiliation
7. Teacher Affiliation
8. Peer Affiliation
9. Family Affiliation

The results of the Senior High Level of the SOS are as follows:

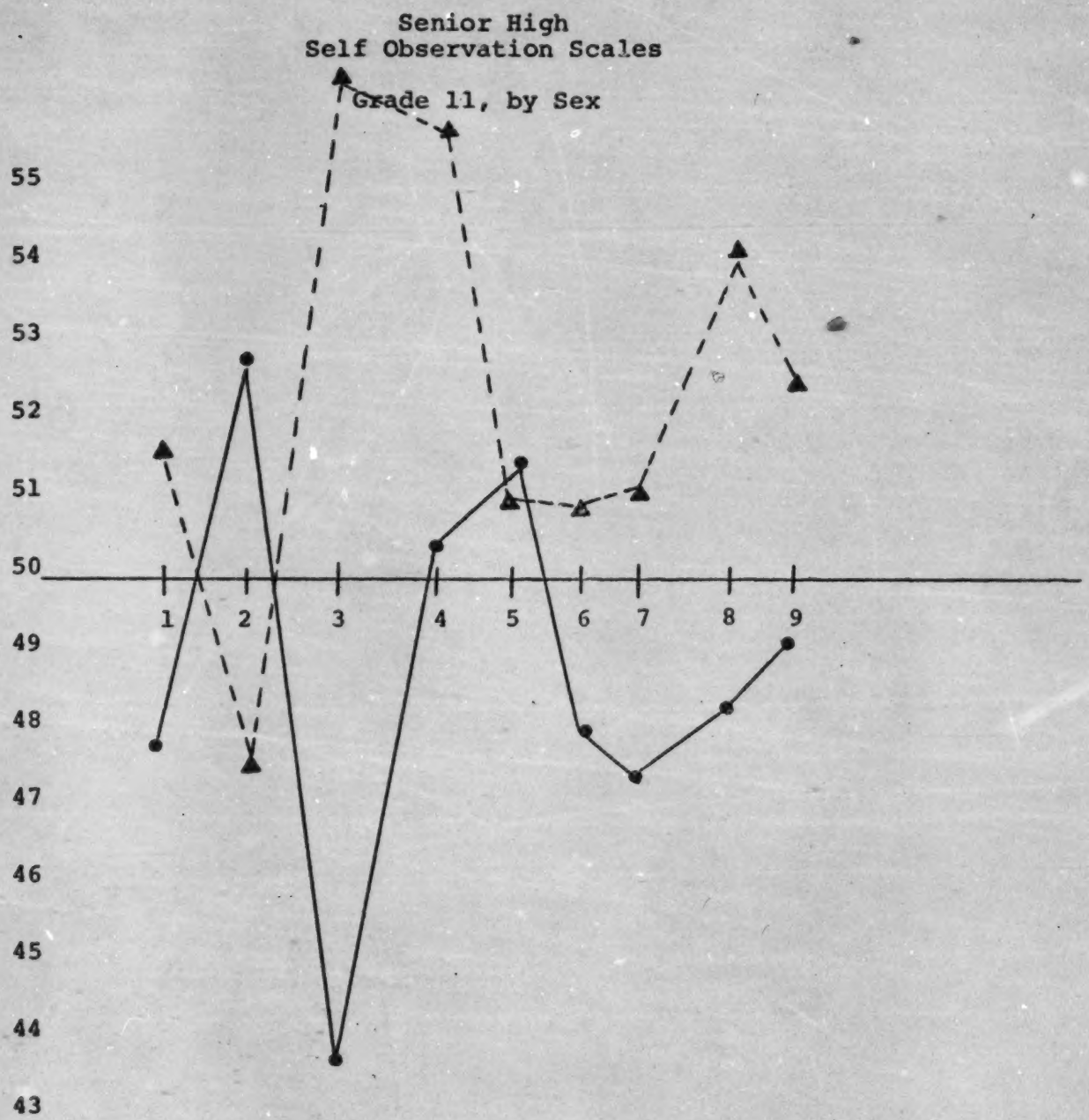
TABLE 8

Self Observation Scales
Senior High Level - Grade 11, N = 197

	Total N=197		Boys N = 84		Girls N = 113	
	Score	S.D.	Score	S.D.	Score	S.D.
Self Assertion	49.8	10.3	47.7	12.2	51.3	8.3
Self Acceptance	49.6	10.6	52.7	9.8	47.3	10.7
Self Security	50.6	9.8	43.6	9.9	55.9	5.7
Social Maturity	53.1	8.5	50.2	9.9	55.2	6.6
Social Confidence	50.9	10.3	51.2	10.6	50.8	10.1
School Affiliation	49.5	10.6	48.0	11.3	50.6	10.0
Teacher Affiliation	49.5	11.2	47.7	12.3	50.8	10.0
Peer Affiliation	51.3	10.6	48.1	12.4	53.6	8.3
Family Affiliation	50.8	10.4	49.1	10.7	52.1	10.0

The results of the SOS given at the 11th grade indicate that the 11th graders are more self secure, have greater social maturity, social confidence, and greater peer and family affiliation. They are low in Self Assertion, Self Acceptance, School Affiliation, and Teacher Affiliation. Three important sex differences are noted (see graph 5). Girls are considerably higher than boys in Self Securtiy and Social Maturtiy, also in Peer Affiliation. The girls are lower than the boys in Self Acceptance.

GRAPH 5



Legend:

Boys ●——●

Girls ▲- - - -▲

Scales:

1. Self Assertion
2. Self Acceptance
3. Self Security
4. Social Maturity
5. Social Confidence
6. School Affiliation
7. Teacher Affiliation
8. Peer Affiliation
9. Family Affiliation

Decision Making Scale

The Decision Making Scale is a new instrument developed by IBEX to gauge the decision making processes of students. Scoring of the Decision Making Scale (DMS) is based on national norms. For each scale, a student receives a standard score (T score), representing a distribution with a mean of 50 and a standard deviation of 10. Responses to individual items are not given.

The following is a description of the scales of the DMS.

SCALE 1 - DECISION INTEGRITY

Students with high scores view themselves positively and have a great deal of confidence in their ability to make sound decisions. Students with low scores perceive,with some uncertainty, the soundness of their decisions. The emphasis on this scale is on how students believe others view the student's decisions and the outcome of the student's decisions. Three items highly related to this scale are: Do you worry a good deal about the effects of your reactions on others?; Do you worry a good deal about what others think of you?; Do you worry a lot about your mistakes?

SCALE 2 - GROUP INTEGRATION

Students with high scores view themselves as vital members of a group. The group respects and solicits input from the individual student in the decision-making process. Students with low scores do not see themselves as a member of a group and have difficulty in group dynamics. Three items highly related to this scale are: Do people care what you think?; Do you keep your problems to yourslef?; Do most people understand you?

SCALE 3 - LEADERSHIP/ASSERTIVENESS

Students with high scores view themselves at the centroid of the decision-making process. They are confident about the quality, validity and reliability of their decisions and the processes which enabled them to reach those decisions. Students with low scores are not so sure about either. Three items highly related to this scale are: Do your friends consider you to be a leader?; Do you enjoy doing things more if you are the leader?; In arguments, does your point of view usually win?

SCALE 4 - INDEPENDENCE/RESPONSIBILITY

Students with high scores would rather make decisions for themselves because they see themselves as the ultimate beneficiary of those decisions. They have a clear set of values and are honest in their perceptions of themsleves and others. Students with low scores would rather let others make decisions in which they have little confidence in the outcome. Four items highly related to the scale are: Would you rather let someone else decide important things for you?; Do you like to decide things for yourself?; Can you be depended on?; Do you have a clear feeling of what's right and what's wrong?

SCALE 5 - TASK-DECISION INSULARITY

Students with high scores on this scale have a tendency to vacillate in either task attendance or decision-making. Extrinsic factors taht impinge on a situation are often the causal agents that cause this student to act. The student with low scores is a self starter who acts with decisiveness and alacrity. Four items highly related to this scale are: Do you hate to be told what to do?; Do you start a lot of things that you never finish?; Do you try to put off big decisions as long as possible?; Do you try to avoid making difficult decisions?

SCALE 6 - LOGICAL ENTROPY

Students with high scores on this scale plan their decisions very carefully with an attempt to integrate all perceived factors that influence the situation. The null set does not exist as a realistic option. The student with low scores on this scale will accept a problem as it exists and make limited attempts to solve it. The low-scoring student sees himself passively rather than actively involved in a situation. Four items highly related to this scale are: Plan your choice carefully, or let someone else decide for you; Pick the first decision that comes to your mind or carefully think the situation through; Follow your conscience or put off making the decision; Choose without thinking about it or use your common sense.

TABLE 9

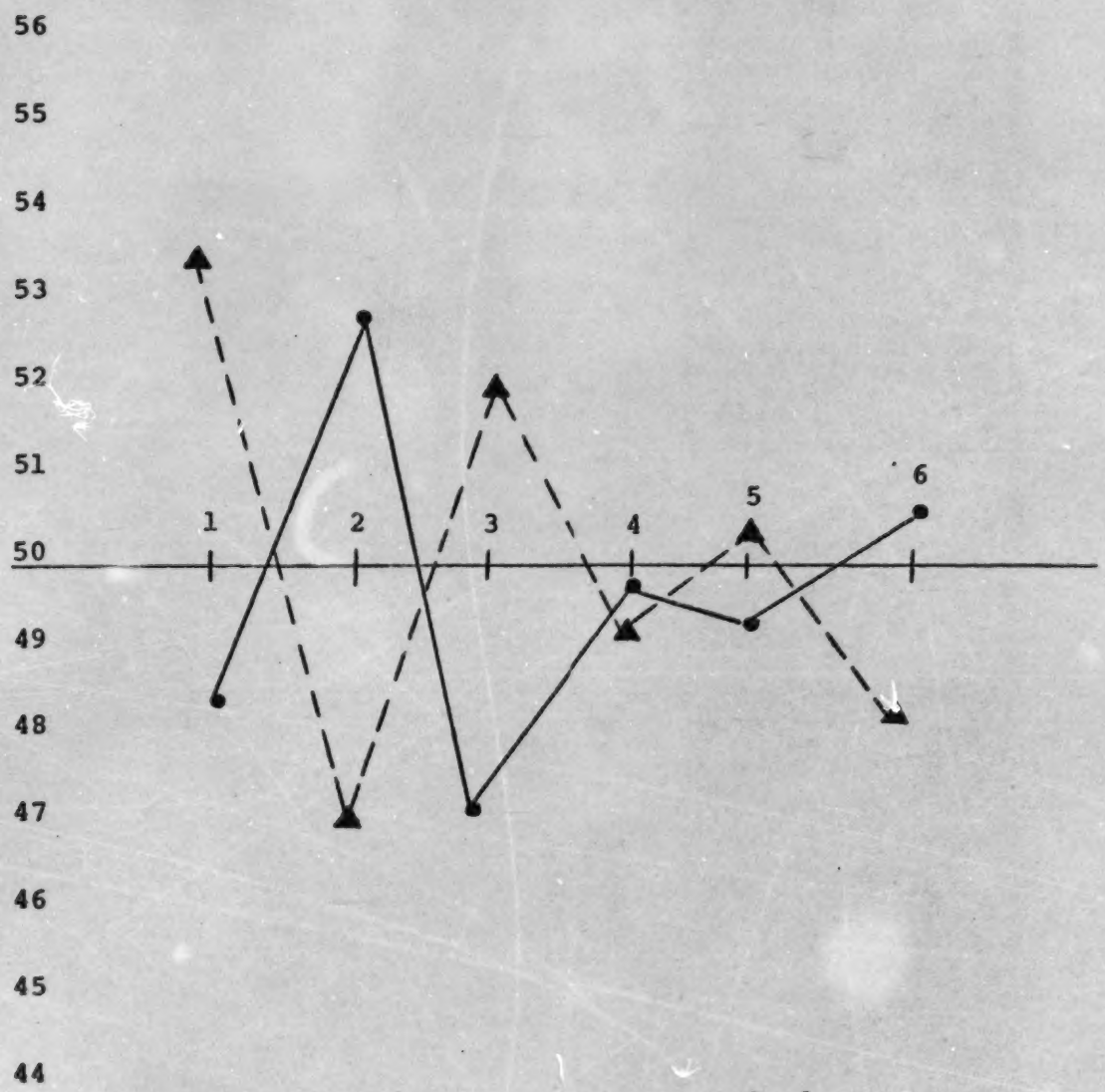
Decision Making Scales
Grade 9, N = 133

	Boys N=65		Girls N=68		Total N=133	
SCALE	Score	S.D.	Score	S.D.	Score	S.D.
1	47.2	10.0	53.0	8.5	50.2	9.7
2	52.4	9.8	46.8	8.3	49.6	9.5
3	47.3	8.9	51.6	10.7	49.5	10.0
4	49.7	10.0	49.3	9.8	49.5	9.9
5	49.4	9.9	50.4	11.0	49.9	10.5
6	50.4	11.3	48.0	9.0	49.2	10.2

The results of the Decision Making Scales at Grade 9 indicate that the ninth graders are very close to the norm on all scales and higher than the norm in Decision Integrity. Some sex difference can be noted, with the girls at this grade level having higher scores on scales 1, 3 and 4. The boys, however, scored higher on scales 2 and 6.

GRAPH 6

Decision Making Scales
Grade 9



Legend:

Boys
Girls

Scales

1. Decision Integrity
2. Group Integration
3. Leadership/Assertiveness
4. Independence/Responsibility
5. Task-Decision Insularity
6. Logical Entropy

TABLE 10

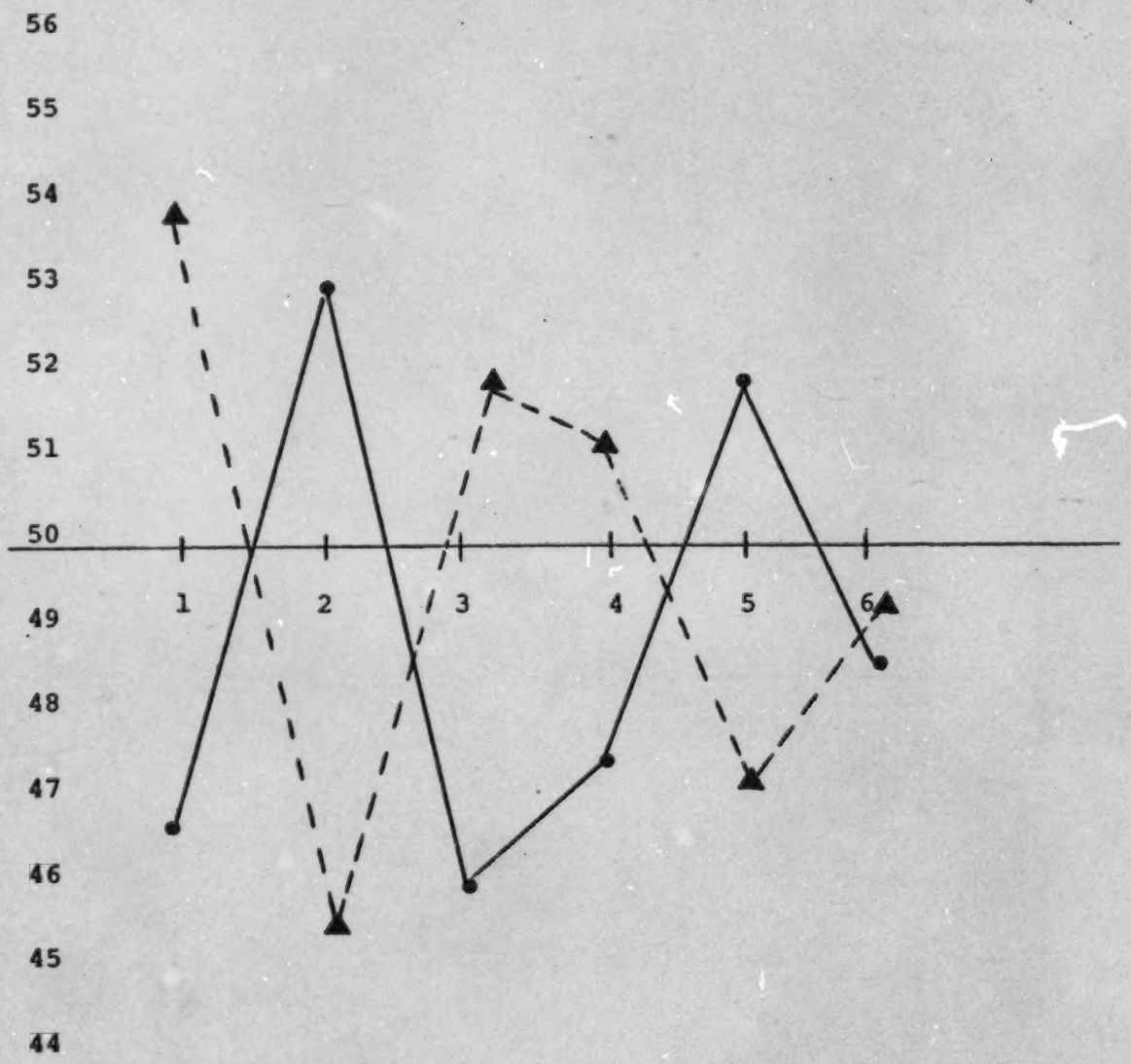
Decision Making Scales
Grade 11, N = 126

	Boys N=50		Girls N=76		Total N=126	
SCALE	Score	S.D.	Score	S.D.	Score	S.D.
1	46.4	10.3	53.6	8.8	50.7	10.0
2	52.7	9.9	45.1	8.1	48.1	9.6
3	45.8	9.4	51.4	9.7	49.2	9.9
4	46.8	10.2	50.7	9.2	49.1	9.8
5	514	10.8	47.0	10.2	48.7	10.7
6	48.2	11.6	48.4	8.5	48.3	9.8

The results of the decision making scales at the 11th grade are a repeat of the pattern of results at the 9th grade. Overall, the results approximate the mean, with Decision Integrity exceeding the mean. Sex differences are evident, and the girls indicate higher levels on scales 1, 3 and 4. The boys, however, indicated higher attainment on Group Integration.

GRAPH 7

Decision Making Scales
Grade 11



Legend:

Boys ●——●
Girls▲- - - - - -▲

Scales

1. Decision Integrity
2. Group Integration
3. Leadership/Assertiveness
4. Independence/Responsibility
5. Task-Decision Insularity
6. Logical Entropy

Career Maturity Inventory

The Career Maturity Inventory (CMI) was given to 7th, 9th and 11th graders. Only parts 4 and 5 were administered, as the time requirement of only one class period for student, for test, could not be met if the full battery was administered. Sections 1, 2 and 3 were not chosen for administration as the Project Director and the Evaluator both felt that the amount of reading required by these sections was excessive.

Part 4 (Looking Ahead) is a section of the CMI which measures the planning sequence in career decision making. The author of the test describes it thusly:

> ... the tendency of the individual to think about the means which are necessary to attain a desired end. Does he simply select a vocational goal and neglect specification of the intermediate steps which lead to it? Or does he "plan out" the entire sequence from its initiation to its completion? As the individual becomes more vocationally mature, he should relate means to ends more frequently... (Crites, 1964, p.328).

Part 5 (What Should They Do?) is a measure of how well an individual can cope with presenting problems in career development prior to entry into the world of work. The author describes it thusly:

> ... In the course of career development during adolescence, problems arise in the process of decision making with which the young person must learn to cope. The more career-mature the adoles-

> cent is, the more able he is to solve these problems in a creative and integrative way - one which is personally satisfying as well as socially acceptable. The problems range from insufficient aptitude for a preferred occupation, through conflict with parents over career goals and limitations imposed by emotional and physical handicaps, to indecision and unrealism in making a career choice. It has been found, for example, that approximately 30 percent of high school seniors and 20 percent of college freshmen are undecided about their careers, and similar percentages are unrealistic in their career decisions. One mark of career maturity, therefore, is how well an individual can solve the problems occurring in the career developmental tasks he is expected to accomplish in preparation for entry into the world of work. To measure this Career Choice Competency, the Problem Solving subtest has been constructed.

The results of the CMI (TABLE 11) indicate that the students at grades 7, 9 and 11 are considerably more mature than their national counterparts. At all grade levels students exceeded the expected mean.

The results of the CMI on part 4 (Looking Ahead) indicate that the boys are vocationally more mature at the 7th grade level than girls. By the 11th grade, the vocational maturity of the girls and boys is approximately the same.

Part 5 of the CMI indicates that the boys and girls at the 7th grade level are at about the same problem resolution level. By the 11th grade, the girls' skills at problem resolution have increased and surpassed the boys'.

TABLE 11

Career Maturity Inventory
Mean Raw Scores and Percentiles
by Grade, by Sex

Part 4: Looking Ahead (Planning)

	Grade Level 7			9			11		
	N	Raw Score	Percentile	N	Raw Score	Percentile	N	Raw Score	Percentile
Boys	30	14	82	23	13	72	18	15	64
Girls	47	12	73	30	15	83	20	15	64
Total	77	13	79	53	14	77	38	15	64

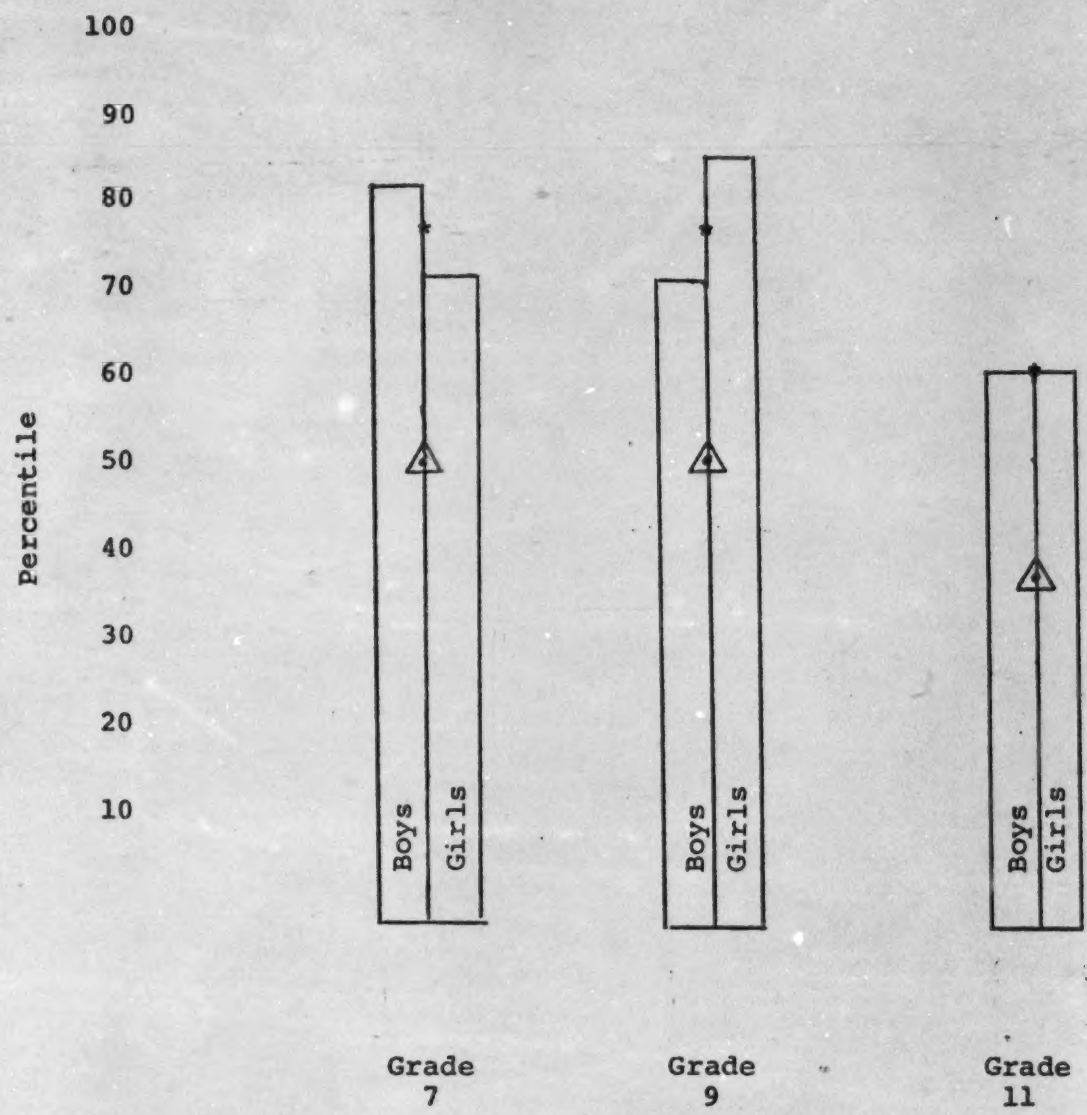
Part 5: What should they do? (Problem solving)

	Grade Level 7			9			11		
	N	Raw Score	Percentile	N	Raw Score	Percentile	N	Raw Score	Percentile
Boys	30	9	75	23	10	75	18	11	69
Girls	47	9	75	30	12	87	20	13	75
Total	77	9	75	53	11	80	38	12	70

GRAPH 9

Career Maturity Inventory
Percentile Scores by Grade, by Sex
Grades 7, 9 and 11

Part 4: Looking ahead.

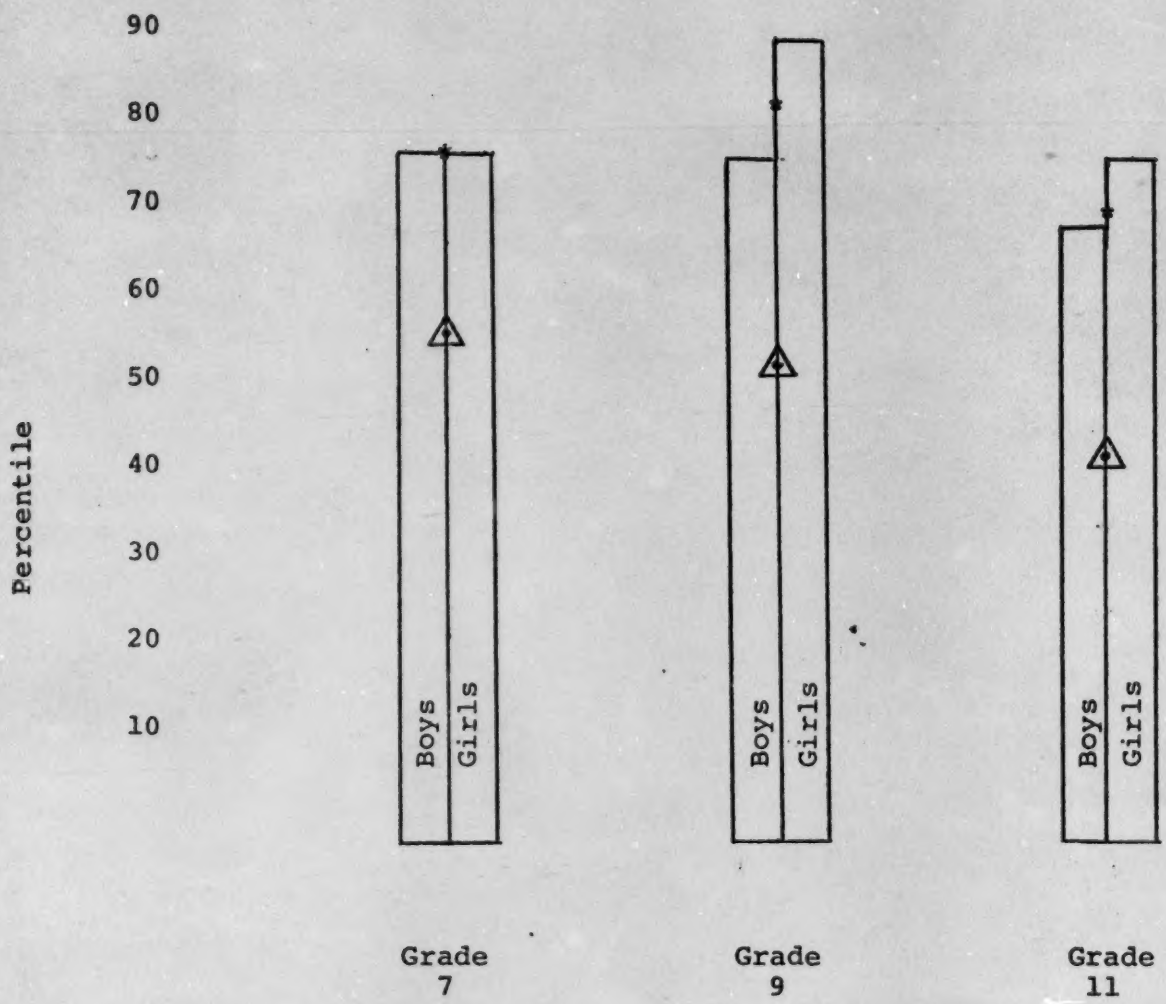


* Indicates Grade Mean
△ Expected Mean

GRAPH 10

Career Maturity Inventory
Percentile Scores by Grade, by Sex
Grades 7, 9 and 11

Part 5: What should they do?



* Indicates Grade Mean (Bristol)
△ Expected Mean

Teacher Use of Career Education Resources and Related Practices

The Teachers' Practices Survey was designed to obtain feedback directly from Project teachers regarding their use of 14 specific techniques and activities related to Career Education.

The teachers were asked to indicate the frequency with which they used each of the activities during the year. At grades K-6 a total of 253 teachers responded. At grades 7-12 only 135 teachers responded. The results of this survey form are presented below. The results are presented in the following order: (1) Public Senior High, (2) Parochial Senior High, (3) Public Primary, (4) Parochial Primary area total scores. The information presented is the frequency of response to a particular question.

The frequency of response to the questionnaire by type of school was:

	Public Senior High School	Parochial Senior High School	Public Primary	Parochial Primary
Total Teachers	120	15	222	31
Responding	30.9%	3.9%	57.2%	8.0%

To the question

"Do you feel that you understand the term "Career Education"? The responses were:

Responses	Public Sr. High	Parochial Sr. High	Public Primary	Parochial Primary	Total
Yes	88.3%	100%	87.8%	87.1%	88.4%
No	-	-	2.3%	-	1.3%
Not Sure	10.0%	-	9.9%	12.9%	9.8%

It is clear from the figures presented that the teachers polled felt, to a large degree, that they understood the term "Career Education". The 100% response in the Parochial Senior High should be considered significant.

To the question

"Would you rather see Career Education taught as a separate element of the curriculum instead of trying to integrate it into other subject areas"? The responses were:

Responses	Public Sr. High	Parochial Sr. High	Public Primary	Parochial Primary	Total
Yes	14.2%	20.0%	21.2%	22.6%	19.1%
No	69.2%	46.7%	58.6%	41.9%	60.1%
Not Sure	15.8%	33.3%	18.5%	22.6%	18.6%

The response pattern to this question seems to indicate that a majority of teachers would not like to see Career Education separated from the total curriculum. It should be pointed out, however, that the two school types (parochial) which felt they understood the term "Career Education" most also felt more strongly about separating it from the curriculum. There is also a higher

percentage of teachers in these schools who are not sure of what to do with Career Education in the curriculum.

To the question

"Do you know who to go to for assistance in planning and implementing Career Education activities"?
The responses were:

Responses	Public Sr. High	Parochial Sr. High	Public Primary	Parochial Primary	Total
Yes	95.8%	100%	88.3%	83.9%	90.7%
No	2.5%	-	3.2%	-	2.6%
Not Sure	0.8%	-	6.8%	6.5%	4.6%

The response pattern to this question clearly shows that the teachers are aware of whom to turn to in case of need with Career Education questions. This indicates a high degree of success for the Career Education staff.

To the question

"Have you, as an individual or as a member of a group, worked with the Career Education resource person in your Area during this school year in any of the following?"

1. Career Education orientation
2. Specific curriculum unit planning
3. Resource materials
4. Coordination of field trip
5. Bringing resource person into the classroom
6. Classroom demonstration of Career Education materials
7. Developing other Career Education teaching techniques
8. Never have worked with the Career Education resourse person

Responses are on the following page.

Responses	Public Sr. High	Parochial Sr. High	Public Primary	Parochial Primary	Total
1.	69.2%	80.0%	73.9%	77.4%	72.9%
2.	19.2%	13.3%	11.7%	12.9%	14.2%
3.	51.7%	46.7%	22.7%	25.8%	34.5%
4.	39.2%	13.3%	30.6%	29.0%	32.5%
5.	45.0%	33.3%	18.9%	35.5%	28.9%
6.	14.2%	13.3%	9.9%	12.9%	11.6%
7.	11.7%	6.7%	9.9%	3.2%	9.8%
8.	21.7%	6.7%	28.4%	22.6%	25.0%

The response pattern does indicate that most teachers (72.9%) have undergone Career Education orientation. Teachers also indicated that they had worked on the areas of "resource materials and coordination of field trips", although the responses (34.5% and 32.5%) do not indicate a high degree of exposure.

For the following question the results are presented for the total school system. The first table lists total responses by item; the second, the percentage it represents. Total responding, 388.

Question: "For this school year, estimate the average frequency with which you have been using each of the following techniques and activities related to Career Education".

TABLE 12

Activity	Frequency of Use				
	nearly every day	at least once/week	at least once/month	a few times during year	never
1. Integration of basic skills with Career Education	41	58	61	126	64
2. Use of library resources related to careers	4	38	47	132	139
3. Interrelation of concepts and careers	29	60	63	137	139
4. Use of video taping of Career Education activities	2	2	14	42	289
5. Class presentation of career opportunities	4	21	43	130	150
6. Displays concerning careers and jobs	9	13	35	114	181
7. Group discussions of careers and job opportunities	5	30	63	164	92
8. Pupil selection of career field of interest	5	13	38	142	148
9. Newspaper ads and magazines related to job opportunities	3	12	30	89	221
10. Career Education materials	8	30	42	128	145
11. Career-related role playing and simulations	7	10	31	112	189
12. Joint planning of activities with Career Education project staff	0	8	16	123	203
13. Career Education films or filmstrips	0	11	41	100	205
14. Visits to factories, businesses or self-employed persons	0	1	6	89	245

TABLE 13

Frequency of Use

(shown as percentages)

Activity	nearly every day	at least once/wk.	at least once/mo	a few times during year	never
1. Integration of basic skills with Career Education	10.6	14.9	15.7	32.5	16.5
2. Use of library resources related to careers	1.0	9.8	12.1	34.0	35.8
3. Interrelation of concepts and careers	7.5	15.5	16.2	35.3	16.0
4. Use of video taping of Career Education activities	0.5	0.5	3.6	10.8	74.5
5. Class presentation of career opportunities	1.0	5.4	11.3	33.5	38.7
6. Displays concerning careers and jobs	2.3	3.4	9.0	29.4	46.6
7. Group discussions of careers and job opportunities	1.3	7.7	16.2	42.3	23.7
8. Pupil selection of career field of interest	1.3	3.4	9.8	36.6	38.1
9. Newspaper ads and magazines related to job opportunities	0.8	3.1	7.7	22.9	57.0
10. Career Education materials	2.1	7.7	10.8	33.0	37.4
11. Career-related role playing and simulations	1.8	2.6	8.0	28.9	48.7
12. Joint planning of activities with Career Education project staff	0	2.1	4.1	31.7	62.3
13. Career Education films or filmstrips	0	2.8	10.6	25.8	52.8
14. Visits to factories, businesses or Self-employed persons	0	0.3	1.5	22.9	63.1

The results of this instrument should be viewed carefully, as gross numbers and percentages can lead the reader astray. One would not expect a teacher, as an example, to go on a field trip every day, but a high usage figure in "integration of basic skills with Career Education" is desired.

Overall, the teachers responding indicated that they are using the concepts of Career Education in the classroom. Of note should be that over 50% of the responding teachers do not: joint plan activities with Career Education staff, use Career Education films or filmstrips, or take field trips. Improvement in these areas should be high on the Career Education staff's list of priorities.

Process Information

The following sections of this report were prepared by the Evaluator from information provided by the Program Director. The sections are: (1) Student Process, (2) Program Budget 1974-75, (3) Allotted Specialist Funds.

The Student Process section is divided into: exploration day sites, field trips and resource speakers. The exploration day sites activities seem to be concentrated in one school, Eastern, with 54% of the total activity occurring in one school. The field trip activity seems to be equally divided among the Senior and Junior High and Elementary schools with each participating at 33, 31 and 33%, respectively, within school categories. However, some schools seem to participate more heavily than others; Eastern at 83%, Memorial Boulevard at 51% and Callum at 27%. Whether this indicates more acceptance of Career Education at these schools or an effort by the Career Education staff to infuse Career Education at only a few schools, is not clear.

The total activity in the resource speaker area is even a more clear picture of a differential effort by school type. The high schools participated in 73%, junior high 9.0% and the elementary schools 16% in the speaker program which consisted of 216 speakers.

The reason for this differential allocation of effort by school and within school type is not clear.

Exploration Day Sites (Total = 273)	Number of Observations	% of total
Central	43	16
Eastern	147	54
St. Paul's	71	26
Memorial Blvd.	4	1.4
St. Ann's	4	1.4
West Woods	4	1.4

Field Trips-(Total trips=87)		Total Field Trips	% of Total by School Type
High Schools			
Central	5	5	17
Eastern	24	24	83
St. Paul's	0	0	0
	Total	29	
	%Total	(33%)	
Junior High			
Memorial Blvd	7-8	14	51
North East	7-8	6	22
St. Ann's	7-8	1	3
West Woods	7-8	4	15
Stafford	7-8	2	7
	Total	27	
	%Total	(31%)	
Elementary			
Callen	K-6	8	27
Green Hills	K-6	2	7
Hubbell	K-6	4	14
Ivy Drive	K-6	3	10
North East	K-6	2	7
O'Connell	K-6	3	10
St. Ann's		2	7
St. Stanislans		1	3
West Woods		1	3
St. Anthony's		3	10
	Total	29	
	%Total	(33%)	

Speakers (Total Speakers=216)	Total Speakers	% of Total
High Schools		
Central	33	21
Eastern	109	70
St. Paul's	15	10
Total	157	
%Total(73%)		
Junior High		
Memorial Blvd.	5	25
North East	3	15
St. Ann's	2	10
St. Stanislans	2	10
West Woods 7-8	8	40
Total	20	
%Total(9.0%)		
Elementary		
Bingham	2	6
Callen	3	8
Edgewood	2	6
Hubbell	5	14
Ivy Drive	4	11
Jennings	4	11
Mountain View	2	6
North East	2	6
Stafford	2	6
S. Chippens Hill	2	6
West Woods K-6	8	22
Total	36	
%Total(16%)		

Budget

The Director's budget is appended without comment. Table 14, which was provided by the Director of the project, however, does warrant some comment.

The funds allocated for supplies and materials indicates that the career specialists were staying within the allocated guidelines. Since no figures were provided as to how much money was allotted to the Career Education Office and how much to Car r Education specialist, R. Matt, no comment as to how well budget guidelines were adhered to in those cases can be made.

The field trip account indicates a wide latitude between allocated funds and expenditures,which supports the information the process data discussed.

TABLE 14

BOARD OF EDUCATION - Monthly Report

	CAREER EDUCATION - 9203	APPROPRIATION	AMENDED APPROPRIATION	ENCUMBRANCES
103	Supervisor Salary	$ 17,300.00	$ 18,700.00	$
104	Teachers Salaries	66,100.00	82,788.60	
113	Secretaries Salaries	6,770.00	10,300.00	
114	Teacher Aides-Salaries	1,980.00	6,420.00	
210	Teaching Supplies	5,900.00	17,000.00	409.49
213	Pupil Services, Testing	1,420.00	1,960.00	
214	Staff Services, Field Consultants	11,639.00	17,339.00	3,253.93
215	Management Services, Evaluation	6,370.00	8,760.00	
217	Statistical Services	355.00	490.00	
219	Tech. Services, Reporting Costs	500.00	5,700.34	
301	Employee Benefits	5,000.00	5,000.00	
319	Office Supplies (Postage,Print.,Dup.,Repro.)	1,731.67	3,203.33	78.00
332	Travel	4,500.00	6,000.00	
421	Utilities, communications	333.33	722.89	
422	Contracted Services-Maintenance(Machines)	355.00	490.00	56.35
440	Telephone		433.34	
531	Regular Transportation		2,295.00	
535	Field Trips	6,035.00	6,535.00	
743	New Equipment	1,000.00	10,000.00	605.95
		$ 137,289.00	$ 204,137.50	$4,403.72

67

TABLE 14

) OF EDUCATION - Monthly Report

APPROPRIATION	AMENDED APPROPRIATION	ENCUMBRANCES	EXPENDITURES	BALANCES
$ 17,300.00	$ 18,700.00	$	$ 19,269.31	$ 569.31
66,100.00	82,788.60		68,735.62	14,052.98
6,770.00	10,300.00		8,947.68	1,357.32
1,980.00	6,420.00		3,085.07	3,334.93
5,900.00	17,000.00	409.49	11,631.22	4,959.29
1,420.00	1,960.00		617.88	1,342.12
11,639.00	17,339.00	3,253.93	14,170.07	84.99-
6,370.00	8,760.00		5.600.00	3,160.00
355.00	490.00			490.00
500.00	5,700.34			5,700.34
5,000.00	5,000.00		4,445.03	554.97
1,731.67	3,203.33	78.00	3,524.44	399.11-
4,500.00	6,000.00		6,643.84	643.84-
333.33	722.89		818.10	95.21
s) 355.00	490.00	56.35	383.65	50.00
	433.34		1,424.49	991.15-
	2,295.00			2,295.00
6,035.00	6,535.00		5,306.30	1,228.70
1,000.00	10,000.00	605.95	9,673.10	279.05-
$ 137,289.00	$ 204,137.50	$4,403.72	$ 164,270.79	$35,462.99

$ 204,137.50

TABLE 15

SUPPLIES/MATERIALS ACCOUNT

Each specialist was allotted $1,425.00

The amount each specialist spent was:

	Spent	Allotted
Kathleen Quinn	$ 1,223.23	$ 1,425.00
Edward Phelan	1,207.35	1,425.00
Angelo Llopis	1,034.99	1,425.00
Frank Dolce	1,533.33	1,425.00
David Doherty	127.18	1,425.00
TOTALS:	$ 5,126.08	$ 7,125.00

Richard Matt(C.E. Resource Center)	$ 3,636.81
C.E. Office (Robert Edmondson)	2,954.52
TOTAL:	$ 6,591.33

FIELD TRIP ACCOUNT

Each specialist was allotted $1,660.00

The amount each specialist spent was:

	Spent	Allotted
Frank Dolce	$ 2,293.30	$ 1,660.00
Angelo Llopis	725.00	1,660.00
Kathleen Quinn	1,144.75	1,660.00
Edward Phlean	861.00	1,660.00
David Doherty	282.25	1,660.00
	$ 5,306.30	$ 8,300.00